

**XP-002135371**

**AN - 2000-135517 [12]**

**AP - RU19960117830 19960828**

**CPY - KURC-R**

**DC - E31 K05 M25**

**FS - CPI**

**IC - C22B5/12 ; C22B60/02**

**IN - RUSANOV V D; TROTSSENKO N M; TUMANOV YU N**

**MC - E11-Q02 E31-B02 E35-R K05-B04 M25-E M25-G25**

**PA - (KURC-R) KURCHATOV INST SCI CENTRE**

**PN - RU2120489 C1 19981020 DW200012 C22B60/02 000pp**

**PR - RU19960117830 19960828**

**XA - C2000-041398**

**XIC - C22B-005/12 ; C22B-060/02**

**AB - RU2120489 NOVELTY - Invention relates to technology and equipment for processing uranium hexafluoride with different <sup>235</sup>U nuclide contents into uranium metal and anhydrous hydrogen fluoride. Application of invention is most preferred to process uranium with dump-waste <sup>235</sup>U contents. Method consists of four consecutive-parallel stages.**

**- DETAILED DESCRIPTION - In the first one, uranium hexafluoride is reduced with hydrogen into uranium and lower uranium fluorides in plasma or gas-plasma apparatus, and high-temperature uranium-fluorine-hydrogen stream is directed onto surface serving to load uranium tetrafluoride disposed in magnetic field-permeable metal-dielectric reactor placed in inductor of high- frequency generator. In the second stage, uranium is completely reduced into element state, which drops into lower section of metal- dielectric reactor. The third stage: removal of uranium through S-shaped pipeline with its one end embedded into bottom of metal- dielectric reactor and the other end located over cooled mold serving to pour out liquid uranium. The fourth stage: withdrawal of gaseous anhydrous hydrogen fluoride through filtration unit fitted with ejection-type blowing-away means to regenerate filter elements. In this stage, second commercial product (anhydrous hydrogen fluoride) is discharged from process apparatus. Installation contains gas-phase reactor coupled with high-temperature generator, metal-dielectric reactor powered from high-frequency generator, liquid uranium and anhydrous hydrogen fluoride discharge means with gas exhaust ecological treatment means.**

**- USE - Uranium production.**

**- ADVANTAGE - Enhanced process efficiency.**

**- (Dwg.1/1)**

**IW - METHOD INSTALLATION PROCESS URANIUM URANIUM METAL HYDROGEN FLUORIDE**

**IKW - METHOD INSTALLATION PROCESS URANIUM URANIUM METAL HYDROGEN FLUORIDE**

**INW - RUSANOV V D; TROTSSENKO N M; TUMANOV YU N**

**NC - 001**

**OPD - 1996-08-28**

**ORD - 1998-10-20**

**PAW - (KURC-R) KURCHATOV INST SCI CENTRE**

**TI - Method and installation for processing uranium hexafluoride into uranium metal and hydrogen fluoride**